

## PATENT COOPERATION TREATY

PCT

NOTIFICATION OF ELECTION  
(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Assistant Commissioner for Patents  
 United States Patent and Trademark  
 Office  
 Box PCT  
 Washington, D.C.20231  
 ÉTATS-UNIS D'AMÉRIQUE

in its capacity as elected Office

Date of mailing (day/month/year) 03 November 1999 (03.11.99)
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International application No. PCT/BE99/00025	Applicant's or agent's file reference P.PURA.08/WO
International filing date (day/month/year) 18 February 1999 (18.02.99)	Priority date (day/month/year) 26 February 1998 (26.02.98)

Applicant ARNAUT, Filip et al
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1. The designated Office is hereby notified of its election made:

in the demand filed with the International Preliminary Examining Authority on:

15 September 1999 (15.09.99)

in a notice effecting later election filed with the International Bureau on:

\_\_\_\_\_

2. The election  was

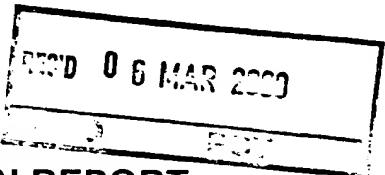
was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer Lazar Joseph Panakal Telephone No.: (41-22) 338.83.38
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## PATENT COOPERATION TREATY

## PCT



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## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference  P.PURA.08/WO	<b>FOR FURTHER ACTION</b>		See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No.  PCT/BE99/00025	International filing date (day/month/year)  18/02/1999	Priority date (day/month/year)  26/02/1998	
International Patent Classification (IPC) or national classification and IPC  A21D10/00			
Applicant  PURATOS NAAMLOZE VENNOOTSCHAP et al.			

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 2 sheets.

3. This report contains indications relating to the following items:

- I  Basis of the report
- II  Priority
- III  Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV  Lack of unity of invention
- V  Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI  Certain documents cited
- VII  Certain defects in the international application
- VIII  Certain observations on the international application

Date of submission of the demand  15/09/1999	Date of completion of this report  02.03.2000
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer  ESTANOL. I  Telephone No. +49 89 2399 8647



**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/BE99/00025

**I. Basis of the report**

1. This report has been drawn on the basis of (*substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.*):

**Description, pages:**

1-12 as originally filed

**Claims, No.:**

1-12 as received on 14/02/2000 with letter of 14/02/2000

**Drawings, sheets:**

1/4-4/4 as originally filed

2. The amendments have resulted in the cancellation of:

the description, pages:  
 the claims, Nos.:  
 the drawings, sheets:

3.  This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

4. Additional observations, if necessary:

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/BE99/00025

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Yes:	Claims 1-12
	No:	Claims
Inventive step (IS)	Yes:	Claims 1-12
	No:	Claims
Industrial applicability (IA)	Yes:	Claims 1-12
	No:	Claims

**2. Citations and explanations**

**see separate sheet**

**VIII. Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

**see separate sheet**

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/BE99/00025

**Item V.**

Reference is made to the following document:

D1: GB-A-998 016

D1 discloses an agglomerating pulverulent flour-containing food mix and a method of preparation. The particle size distribution of the agglomerated mix of D1 (see example 3 on page 4) is as follows:

6.7% has a particle size of at least 2.83 mm (7 Tyler Mesh),  
11.9% has a particle size of at least 1.19 mm (14 Tyler Mesh),  
52.6% has a particle size of at least 841  $\mu\text{m}$  (20 Tyler Mesh),  
25.9% has a particle size of at least 354  $\mu\text{m}$  (42 Tyler Mesh).

The rest of the particles passed through the 45 mesh screen (more than 300  $\mu\text{m}$ ).

Novelty:

The subject-matter of claim 1 is new over D1 since the bread improver of present claim 1 comprises particles being made of at least fat and enzymes (Article 33(2) PCT).

The method of present independent claim 7 is new over D1 since the particle size of the starting material in present claim 7 is lower than 200  $\mu\text{m}$ .

Inventive step:

The problem underlying the present invention may be regarded as how to provide a free-flowing, non-sticky bread improver which may reduce the risk of potential allergenicity.

D1 solves the same problem by a method of agglomerating particles comprising depositing the binding material on to the dry particles while tumbled or agitated (atomizing nozzle under high pressure) (see claims 1 to 7 and page 2, lines 3-60).

There is no indication in the available prior art to improve the agglomeration of particles made by a mixture of fat and enzymes. Due to the different lipophilic/hydrophilic characteristics of both components, it is not obvious to obtain an agglomeration of the particles made of the above mentioned ingredients which maintain the activity of its

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/BE99/00025

ingredients without leading to the formation of a product that may tend to stick. The obtained agglomerated particles of the bread improver of the present invention are stable and characterised by a low standard deviation. Thus, the subject-matter of claims 1 and 7 is considered as involving an inventive step (Article 33(3) PCT).

Dependent claims 2-6 and 8-12 are dependent on claims 1 and 7, respectively, and as such also meet the requirements of the PCT with regards to novelty and inventive step.

Industrial applicability: The subject-matter of claims 1 to 12 is applicable in the food industry (Article 33(4) PCT).

**Item VIII.**

The features of claim 6 are not referred to in the description. Claim 6 is therefore not supported by the description as required by Article 6 and Rule 5.1(a)(iii) PCT.

Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in document D1 is not mentioned in the description, nor is this document identified therein.

Office Van Malderen  
Bxl - 14 February 2000  
P.PURA.08/WO (Claims)

CLAIMS

5                   1. Bread improver in the form of a powder, characterised in that it is made of agglomerated particles having a mean particle size of at least 250  $\mu\text{m}$ , **said particles being made of at least fat and enzymes**.

10                 2. Improver according to claim 1, characterised in that said particles further comprise proteins.

                   3. Improver according to claim 1 or 2, characterised in that the mean agglomerated particle size is comprised between 300 and 2000  $\mu\text{m}$ .

15                 4. Improver according to any of the claims 1 to 3, characterised in that the standard deviation/mean agglomerated particle size ratio is lower than 0.8, preferably lower than 0.65.

20                 5. Improver according to claim 1 or 2, characterised in that the particles further comprise ingredients selected from the group consisting of emulsifiers, sugar (including polysaccharides), organic acids, minerals and/or a mixture thereof.

25                 6. Improver according to claim 5, characterised in that the particles further comprise a carrier, preferably selected from the group consisting of starch, wheat flour soy flour.

30                 7. Method for obtaining a granulated bread improver according to any one of the preceding claims, said method comprising the steps of:

                   - preparing a starting material being a bread improver **made of at least fat and enzymes**, in the form of a dried powder having a mean particle size lower than 200  $\mu\text{m}$ ,

                   - introducing and maintaining said starting material in a

35                 fluidised bed reactor, under spraying of an atomised

AMENDED SHEET

liquid, in order to obtain an agglomeration of the dried powder particles of said material, and

- recovering a bread improver in the form of a dried powder made of agglomerated particles having mean particle size of at least 250  $\mu\text{m}$ .

5 8. Method according to claim 7, characterised in that the standard deviation/mean agglomerated particle size ratio of the agglomerated particles is lower than the standard deviation/mean agglomerated particle size ratio of  
10 said starting material.

9. Method according to claim 8, characterised in that the liquid comprises water.

10. Method according to claim 9, characterised in that the liquid further comprises an  
15 agglomerating agent selected from the group consisting of polysaccharides (such as guar, alginate, carrageenan, pectin, maltodextrins) or proteins (such as gelatin) and/or a mixture thereof.

11. Method according to any one of the claims  
20 7 to 10, characterised in that the temperature of the fluidised bed reactor is comprised between 20 and 45  $^{\circ}\text{C}$ , more preferably between 25 and 40  $^{\circ}\text{C}$ .

12. Method according to any one of the claims  
25 7 to 11, characterised in that the fluidised bed reactor is a Glatt granulating device.

## PATENT COOPERATION TREATY

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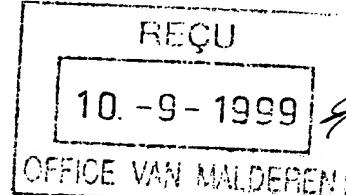
NOTICE INFORMING THE APPLICANT OF THE  
COMMUNICATION OF THE INTERNATIONAL  
APPLICATION TO THE DESIGNATED OFFICES

(PCT Rule 47.1(c), first sentence)

Date of mailing (day/month/year)  
02 September 1999 (02.09.99)

From the INTERNATIONAL BUREAU

To:

VAN MALDEREN, Eric  
Office Van Malderen  
Place Reine Fabiola 6/1  
B-1083 Brussels  
BELGIQUEApplicant's or agent's file reference  
P.PURA.08/WO

## IMPORTANT NOTICE

International application No.  
PCT/BE99/00025International filing date (day/month/year)  
18 February 1999 (18.02.99)Priority date (day/month/year)  
26 February 1998 (26.02.98)Applicant  
PURATOS NAAMLOZE VENNOOTSCHAP et al

1. Notice is hereby given that the International Bureau has communicated, as provided in Article 20, the international application to the following designated Offices on the date indicated above as the date of mailing of this Notice:

AU,CN,EP,IL,JP,KP,KR,US

In accordance with Rule 47.1(c), third sentence, those Offices will accept the present Notice as conclusive evidence that the communication of the international application has duly taken place on the date of mailing indicated above and no copy of the international application is required to be furnished by the applicant to the designated Office(s).

2. The following designated Offices have waived the requirement for such a communication at this time:

AL,AM,AP,AT,AZ,BA,BB,BG,BR,BY,CA,CH,CU,CZ,DE,DK,EA,EE,ES,FI,GB,GD,GE,GH,GM,HR,HU,  
ID,IN,IS,KE,KG,KZ,LC,LK,LR,LS,LT,LU,LV,MD,MG,MK,MN,MW,MX,NO,NZ,OA,PL,PT,RO,RU,SD,  
SE,SG,SI,SK,SL,TJ,TM,TR,TT,UA,UG,UZ,VN,YU,ZW

The communication will be made to those Offices only upon their request. Furthermore, those Offices do not require the applicant to furnish a copy of the international application (Rule 49.1(a-bis)).

3. Enclosed with this Notice is a copy of the international application as published by the International Bureau on  
02 September 1999 (02.09.99) under No. WO 99/43213

## REMINDER REGARDING CHAPTER II (Article 31(2)(a) and Rule 54.2)

If the applicant wishes to postpone entry into the national phase until 30 months (or later in some Offices) from the priority date, a **demand for international preliminary examination** must be filed with the competent International Preliminary Examining Authority before the expiration of 19 months from the priority date.

It is the applicant's sole responsibility to monitor the 19-month time limit.

Note that only an applicant who is a national or resident of a PCT Contracting State which is bound by Chapter II has the right to file a demand for international preliminary examination.

## REMINDER REGARDING ENTRY INTO THE NATIONAL PHASE (Article 22 or 39(1))

If the applicant wishes to proceed with the international application in the **national phase**, he must, within 20 months or 30 months, or later in some Offices, perform the acts referred to therein before each designated or elected Office.

For further important information on the time limits and acts to be performed for entering the national phase, see the Annex to Form PCT/IB/301 (Notification of Receipt of Record Copy) and Volume II of the PCT Applicant's Guide.

The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Facsimile No. (41-22) 740.14.35

Authorized officer

J. Zahra

Telephone No. (41-22) 338.83.38

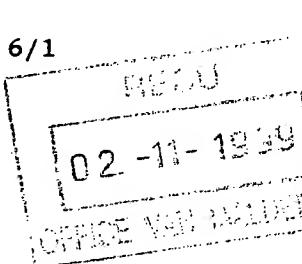
# PATENT COOPERATION TREATY

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

PCT

To:

VAN MALDEREN, Eric  
OFFICE VAN MALDEREN  
Place Reine Fabiola 6/1  
B-1083 Bruxelles  
BELGIQUE



## NOTIFICATION OF RECEIPT OF DEMAND BY COMPETENT INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

(PCT Rules 59.3(e) and 61.1(b), first sentence  
and Administrative Instructions, Section 601(a))

Date of mailing  
(day/month/year)

27. 10. 99

Applicant's or agent's file reference <b>P. PURA. 08/WO</b>		IMPORTANT NOTIFICATION	
International application No. <b>PCT/ BE 99/ 00025</b>	International filing date (day/month/year) <b>18/02/1999</b>	Priority date (day/month/year) <b>26/02/1998</b>	
Applicant <b>PURATOS NAAMLOZE VENNOOTSCHAP et al.</b>			

1. The applicant is hereby **notified** that this International Preliminary Examining Authority considers the following date as the date of receipt of the demand for international preliminary examination of the international application:

15/09/1999

2. This date of receipt is:

the actual date of receipt of the demand by this Authority (Rule 61.1(b)).  
 the actual date of receipt of the demand on behalf of this Authority (Rule 59.3(e)).  
 the date on which this Authority has, in response to the invitation to correct defects in the demand (Form PCT/IPEA/404), received the required corrections.

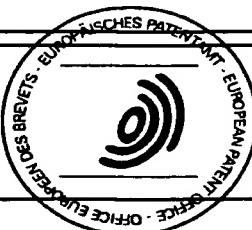
3.  **ATTENTION:** That date of receipt is **AFTER** the expiration of 19 months from the priority date. Consequently, the election(s) made in the demand does (do) not have the effect of postponing the entry into the national phase until 30 months from the priority date (or later in some Offices) (Article 39(1)). Therefore, the acts for entry into the national phase must be performed within 20 months from the priority date (or later in some Offices) (Article 22). For details, see the *PCT Applicant's Guide*, Volume II.

(If applicable) This notification confirms the information given by telephone, facsimile transmission or in person on:

\_\_\_\_\_

4. Only where paragraph 3 applies, a copy of this notification has been sent to the International Bureau.

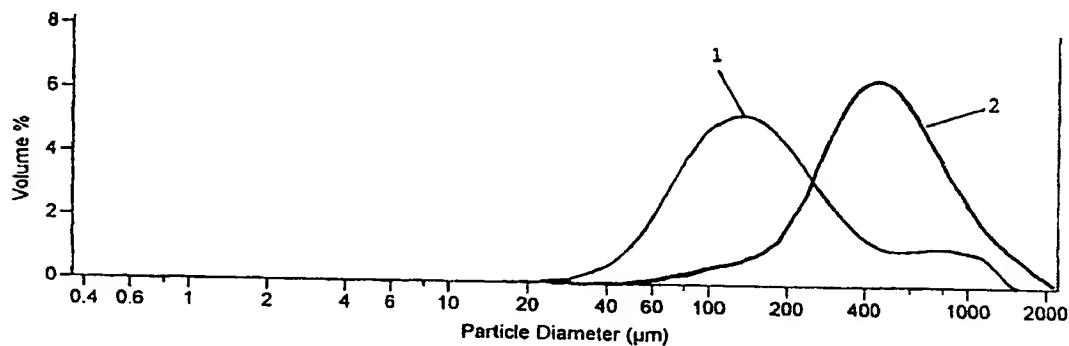
Name and mailing address of the IPEA/   European Patent Office D-80298 Munich Tel. (+49-89) 2399-0, Tx: 523656 epmu d Fax: (+49-89) 2399-4465	Authorized officer  MORENO R A Tel. (+49-89) 2399-2658
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## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 : A21D 10/00, 2/00, 8/04		A1	(11) International Publication Number: <b>WO 99/43213</b>	
			(43) International Publication Date: 2 September 1999 (02.09.99)	
(21) International Application Number: PCT/BE99/00025			(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).	
(22) International Filing Date: 18 February 1999 (18.02.99)				
(30) Priority Data: 98870039.9 26 February 1998 (26.02.98) EP				
(71) Applicant (for all designated States except US): PURATOS NAAMLOZE VENNOOTSCHAP [BE/BE]; Industrialaan 25, B-1702 Groot-Bijgaarden (BE).				
(72) Inventors; and				
(75) Inventors/Applicants (for US only): ARNAUT, Filip [BE/BE]; Weverstraat 58, B-1761 Roosdaal (BE). JANKE, Hans-Christian [DE/DE]; Timmerbruch 31, D-57368 Lennestadt (DE).			Published With international search report.	
(74) Agents: VAN MALDEREN, Eric et al.; Office Van Malderen, Place Reine Fabiola 6/1, B-1083 Brussels (BE).				

(54) Title: GRANULATED BREAD IMPROVER FOR THE PREPARATION OF BAKERY PRODUCTS



## (57) Abstract

The present invention is related to a bread improver in the form of a powder, characterised in that it is made of agglomerated particles having a mean particle size of at least 250  $\mu\text{m}$ . The present invention is also related to the preparation method of said bread improver.